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STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, in Charge

Dr. R. T. Cotton returned to Washington on March 29 from a trip to Manhattan, Kans., where he conferred with Gilbert A. Schenk regarding the bureau's work on flour-mill insects. While there he visited the entomological department of the Kansas State Agricultural College, and gave an informal talk before the Popenoe Club on some new developments in fumigation.

On Dr. Cotton's return trip he made stops at St. Joseph, Kansas City, and St. Louis. At St. Joseph a series of experiments were carried on at a large candy factory, to determine the dosage required for the successful fumigation of nut meats with ethylene oxide and HCN. The experiments were made in a vacuum tank of 300 cubic feet capacity. In Kansas City a number of visits were made to firms and agencies interested in the problem of flour-mill insects. Dr. Cotton called on various firms in the nut-meat and food-product business in St. Louis to discuss methods of fumigation for the control of losses by insects.

In checking over the infestation records secured from bean warehouses, A. O. Larson found an isolated case of heavy infestation by bean weevils and determined to locate the source, if possible. When the grower of the infested beans was found he said that his 1928 bean crop had been the first grown on his place, that he had no bean straw or beans on the premises, and that he was sure that his neighbors had none. As no beans had been grown within about two miles of this grower's infested field, Mr. Larson's experience led him to believe that persistence would uncover the source of infestation. On learning the experiences of other growers, this farmer was led to recollect that after he had done the planting he had placed about two pounds of left-over beans in an open pail, which he hung from the rafter of a shed near the field where his beans had been grown. An examination of the seeds showed them to be badly infested by bean weevils, thus establishing another definite case of the origin of field infestations.

Early in March W. D. Reed attended a committee meeting of the Fresno Federal Business Association, to consider arrangements for the joint meeting of the Federal Business Association of California, which is to be held in Fresno April 6.

On March 20 Perez Simmons and W. D. Reed attended a meeting, held in Fresno, of the State Fig Clean-Up Committee.

Perez Simmons spent March 13 and 14 at the University of California, doing library work.

TAXONOMIC INVESTIGATIONS

Harold Morrison, in Charge

Dr. D. M. DeLong, Professor of Entomology at the Ohio State University and a collaborator of the Bureau of Entomology, spent nearly the entire month of March in Washington in the Division of Insects of the National Museum working on specimens belonging to the genus Empoasca. He is engaged in the preparation of a critical review of the American species, with particular reference to the species of economic importance. He returned to Columbus on March 27.

Dr. Karl Friedericks, of the University of Rostock, met several of the specialists in taxonomy of the bureau on March 25, and in the afternoon was taken by Dr. Chapin to the colony of Zoraptera near Falls Church, Va., which was discovered by the latter some time ago, and which has been under his continuous observation since.

Miss Alma W. Rutledge, a graduate of the University of Illinois, accepted a temporary appointment, effective March 5, as Junior Scientific Aid in the Taxonomic Unit.

A. G. Weeks, of Boston, a well-known student of Lepidoptera, called at the National Museum March 6 to consult with Dr. William Schaus.

On March 19 H. S. McConnell, of the Maryland Agricultural Experiment Station, at College Park, called to obtain from the bureau's specialists in taxonomy information on some parasitic Hymenoptera in which he is interested.

Morgan Hebard, of the Philadelphia Academy of Sciences, spent March 25 with A. N. Caudell, studying the National collections of Orthoptera, with special reference to a paper which he is preparing on the Orthoptera of Colorado.

W. W. Stanley, of the Agricultural Experiment Station of the University of Tennessee, at Knoxville, called at the National Museum on March 29 to consult bureau specialists. He was especially interested in seeing the collections of cutworms and leaf-cutter bees, and while here obtained a list of references to publications on the habits of the latter.

Prof. G. C. Crampton, of the Massachusetts Agricultural College, at Amherst, a well-known authority on insect morphology, called on March 18 to get identifications of some interesting insects from Chile which he expects to use in his morphological work. The fauna of Chile contains some insects of decidedly primitive structure, which Professor Crampton finds unusually interesting and important.

Dr. W. A. Hoffman, of the Medical School in Porto Rico, visited the National Museum on March 16 to examine types of some minute blood-sucking midges.

R. T. Webber, of the Gipsy Moth Laboratory, Melrose Highlands, Mass., came to the National Museum on March 25 to spend a few days examining types and other material in order to complete a paper on a group of parasitic flies which he has been studying for several years.

W. H. Thorpe, of Cambridge University, England, Traveling Fellow in Entomology, visited the Division of Insects several days in the last week of March. While here he examined the specimens in the collection belonging to a small group of predacious flies introduced from Australia into California many years ago, as parasites on the cottony cushion scale. Mr. Thorpe also spent some time with some of the bureau specialists, obtaining identifications and other information regarding various insects. He was taken by Mr. Barber to the field laboratory at Sligo, Md., for consultation with Dr. McIndoo and Mr. Siegler.

F. F. Carpenter, of the Roosevelt High School, Dayton, Ohio, recently visited the Museum to examine material in some species of flies the larvae of which attack water lilies.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, in Charge

L. C. McAlister was transferred early in March from Moorestown, N. J., to Cherryfield, Me., where he will be associated with Dr. F. H. Lathrop in investigations of the blueberry maggot.

H. G. Butler, a graduate of the Colorado Agricultural College, was appointed Assistant Entomologist March 14 and assigned to duty at Wichita, Kans., where he will be associated with Dr. P. M. Gilmer in investigations of the codling moth.

Contributions from the Japanese-Beetle Laboratory

On March 10 Dr. George L. Baker, Assistant Research Chemist at the Delaware Agricultural Experiment Station, visited the laboratory to consult with chemists there.

On March 25 William H. Thorpe, Esq., Demonstrator, Zoological Laboratories, Cambridge, England, visited the laboratory to observe the equipment for biological control. Mr. Thorpe was also interested in the chemotropic work.

On March 26 Dr. R. W. Glaser and N. H. Coria, both of the Rockefeller Institute, Princeton, N. J., visited the laboratory to consult with L. B. Smith and Dr. Henry Fox.

E. Avery Richmond, formerly in charge of physiological work at the Japanese Beetle laboratory, has tendered his resignation, effective April 1. Mr. Richmond has taken a commercial position with Rohm & Haas Co., Bristol, Pa.

FOREST-INSECT INVESTIGATIONS

F. C. Craighead, in Charge

Dr. F. C. Craighead and J. A. Beal, in charge of the field laboratory at Asheville, N. C., spent the first two weeks in March at Starke, Fla., working with members of the Southern Forest Experiment Station of the Forest Service on the interrelation of the turpentine borer (Buprestis apricans Hbst.) and turpentining operations. It is believed that fairly satisfactory measures have been worked out which will effectively prevent practically all of the damage by the borer. Mr. Beal remained at Starke until the latter part of March to complete observations on the feeding habits and oviposition of this insect.

Dr. T. E. Snyder returned from Panama on March 26, after inspecting the experiments with wood preservatives being conducted in the Canal Zone. Excellent results are being obtained with brief treatment and the tests have been greatly enlarged. On March 28 a conference was held under the auspices of the National Committee on Wood Utilization, in the Department of Commerce, Washington, D. C., to present preliminary results on the uses of treated woods in the tropics and the latest information on the work being done in termite-proofing buildings.

From April 1 to June 15 Dr. T. E. Snyder will be on leave without pay to give a course in biological entomology at the University of Chicago, and expects to return to Washington about the middle of June.

The annual meeting of the District Investigative Committee, District 5, Forest Service, on February 28 and March 1 at San Francisco, was attended by J. M. Miller, F. P. Keen, and H. L. Person, all of the field laboratory at Palo Alto, Calif. The program of cooperative projects involving forest-insect investigations within the district was reviewed at this meeting.

J. E. Patterson, of the field laboratory at Palo Alto, has been working up the section on forest entomology in the Naturalists' Information Manual for Crater National Park. W. D. Edmonston has completed drawings for illustrating the manual, which will be issued in mimeographed form. This manual is being prepared in collaboration with Ansel Hall, Chief Naturalist for the National Park Service.

The research Council of the California Forest Experiment Station met in San Francisco on February 4, Dr. Ray Lyman Wilbur, President of Stanford University, presiding. The meeting was attended by Messrs. Miller and Person of the field laboratory at Palo Alto. Mr. Person read a paper on the experimental work in forest entomology which is being carried on in cooperation with the Experiment Station.

On February 22 J. M. Miller visited the nursery of the Eddy Tree-Breeding Station at Placerville, Calif. This station is working on the selection and hybridization of conifers, with the object of developing better strains of timber-producing trees. A pine-shoot moth has been causing considerable damage in the nursery and transplant beds.

At the request of the City Engineer's Office, received through J. K. Fisher, of the Bean Weevil Laboratory at Modesto, Calif., Dr. H. E. Burke and Albert Wagner, both of the field laboratory at Palo Alto, visited Modesto, Calif., March 11 and 12, to investigate and advise on a program of spraying the city shade trees to control several insect pests which have caused considerable trouble in the past. The principal pests found were the European elm scale on elm, the sycamore bark scale (Stomacoccus platani Ferris) and the western sycamore lace bug (Colythucha confraterna Gibson) on the sycamore, and the hornet moth (Alcathoe apiformis Clerck) on poplar.

On March 7 J. M. Miller and Dr. H. E. Burke attended a meeting of the California State Board of Forestry, held in San Francisco, to discuss the allotment of the next biennial appropriation of State funds for cooperating with Federal forest-research agencies. E. I. Kotok, Director of the Forest Experiment Station at Berkeley, and Messrs. Bowie and Gray, of the Weather Bureau, San Francisco, were other officials of the Department of Agriculture who were present.

Contributions from the Gipsy-Moth Laboratory

Visitors to the Gipsy-Moth Laboratory in March included Miss E. G. Rice and four of her students at the Brookline, Mass., High School, March 5; G. A. Smith, in charge of moth work, Massachusetts Department of Conservation, and six of his division superintendents, March 7; A. B. Baird, Entomological Branch, Canadian Department of Agriculture, and D. W. Jones, of the Corn-Borer Laboratory, Arlington, Mass., March 13.

R. T. Webber went to Washington on March 24, to be there for about 10 days. He will spend considerable time at the National Museum, studying material belonging to the tachinid genus Achaetoneura.

A periodical exchange was started about January 1 at the Gipsy-Moth Laboratory, different members of the staff subscribing to one or more periodicals which, for the most part, deal with entomology. At present 22 periodicals are made available in this way.

INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, in Charge

F. C. Bishopp spent the latter half of March in travel through Florida, Georgia, and the Carolinas, making observations and gathering information concerning mosquitoes, sand flies, and ticks. He attended an anti-mosquito meeting at Ft. Pierce, Fla., March 19 and 20.

T. E. McNeel has been transferred from Mound, La., to Zellwood, Fla., for temporary work on the mosquitoes there.

COTTON-INSECT INVESTIGATIONS

B. R. Coad, in Charge

Four commodious new buildings, with all modern conveniences, especially constructed by local capital to meet the expanding needs of the field laboratory at Tallulah, were completed in March and have been occupied. Two of the buildings provide quarters for the chemical and biological laboratories and the field forces; one is used for an automobile repair shop and storage room for cars and trucks, and one provides storage for insecticides, field equipment and necessary miscellaneous items. They are located 2 miles south of Tallulah, on Number 65 National Highway, and occupy one of the highest and most desirable places in the vicinity of Tallulah.

Electric lighting of the air field, to be used for night flying to collect insects, is nearing completion.

C. S. Rude was appointed Assistant Entomologist March 1, and has been assigned to the pink bollworm field laboratory at El Paso, Tex.

R. C. Young was appointed machinist March 11.

On March 1 W. H. Rumff was appointed field assistant at the cooperative field laboratory at Florence, S. C.

On March 15 S. L. Calhoun was appointed field assistant in pink boll-worm investigations at El Paso, Tex.

William Hackett, Forest Ranger at the field laboratory at Tucson, Ariz., has resigned, effective February 28.

T. P. Cassidy, in charge of the field laboratory at Tucson, Ariz., arrived at Tallulah on March 30, for a few days conference with B. R. Coad.

TROPICAL, SUBTROPICAL AND ORNAMENTAL PLANT INSECT INVESTIGATIONS

A. C. Baker, in Charge.

Dr. Fenner S. Stickney, in charge of the field laboratory at Indio, Calif., has come to Washington, D. C., to conduct treatments on date-palm offshoots which are being imported by the Bureau of Plant Industry. This work is being done under the direction of the Plant Quarantine and Control Administration, to which Dr. Stickney has been temporarily assigned until the conclusion of the treatments.

E. A. McGregor has addressed farm bureau center meetings in central California, speaking on the subject of citrus-thrips control., at Visalia on February 25, Orange Cove, March 8, and Lindsay, March 19.

On March 20 E. A. McGregor attended the quarterly meeting of the state-wide fig clean-up committee of which he is now a member, and read a report on the life history and biology of the Mediterranean fig scale.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, in Charge

R. W. Harned, State Entomologist of Mississippi, visited the field laboratory at Biloxi, Miss., on March 2, and discussed certain phases of the work on the sweet potato weevil being conducted jointly by the Bureau of Entomology and the Mississippi State Plant Board.

Dr. L. O. Howard visited the field laboratory at Alhambra, Calif., on March 12 to 14.

M. D. Leonard, of the Tobacco By-Products and Chemical Co., was a visitor at the field laboratory at Alhambra, Calif., on March 19.

N. F. Howard, Columbus, Ohio, spent March 18 and 19 in Washington, discussing certain phases of the situation regarding the Mexican bean beetle.

R. E. Campbell made a trip to Arizona during the latter part of March, visiting the field laboratory at Tempe and consulting with Dr. E. D. Ball at the University of Arizona.

D. E. Fox has been transferred from Twin Falls, Idaho, to Richfield, Utah, where he will assist E. W. Davis in investigations on the sugar-beet leafhopper.

J. C. Elmore returned to Garden Grove, Calif., March 31, from his visit to Washington. He also stopped off at the field laboratory at Twin Falls, Idaho.

Temporary appointments as field assistants have been given H. L. Dees, assigned to duty at Picayune, Miss., J. A. Milbrath and J. F. Bock, assigned to duty at Walla Walla, Wash., D. N. Eagle, at Toppenish, Wash., and B. J. Landis, at Columbus, Ohio. H. C. Mason has been appointed agent, and assigned to duty at Columbus, Ohio.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, in Charge

Kenneth Hawkins, of the G. B. Lewis Company, Watertown, Wis., consulted with members of the laboratory on March 13. Mr. Hawkins, through the G. B. Lewis Company, has assisted very materially in furthering a number of projects of the Division of Bee Culture. He was responsible for the recent issue of "Beecause," which is devoted almost entirely to the desirability of bringing about standardization in the package-bee industry, one of the projects now being undertaken at the Southern States Bee Culture Field Laboratory, at Baton Rouge, La.

George H. Rea, of Reynoldsville, Pa., who is establishing an apiary at New Bern, N. C., which will be devoted largely to the production of package bees, visited the Bee Culture Laboratory on March 22. Mr. Rea is particularly interested in the long-distance shipment of package bees, and had a number of suggestions to make with regard to the type of cage and the kind and quantity of food necessary for unusually long shipment of combless packages.

W. J. Nolan left March 17 to spend two or three weeks at the Southern States Bee Culture Field Laboratory, Baton Rouge, La., to continue his work on queen-rearing and queen-breeding. The establishment of a sub-laboratory in the South is making it possible to lengthen the active season for a number of research projects which this division is carrying on.

Dr. Lloyd R. Watson, of Alfred, N. Y., visited the laboratory on March 25 and 26, to discuss with members of the staff the results of his work last year on the artificial insemination of queenbees. Doctor Watson has devised a number of new and important changes in his technique which are giving much better results than his procedure as last reported.

Dr. A. P. Sturtevant and J. E. Eckert, of the United States Intermountain Bee Culture Field Laboratory, Laramie, Wyo., attended the convention of the Colorado Honey Producers' Association held in Denver on March 4 and 5. The fact that this was the thirtieth annual convention of this cooperative association deserves special mention. There are perhaps few organizations which are cooperatively handling agricultural products in this country which can boast of such a successful record. Without doubt one of the reasons for the long and successful existence of this organization has been the congenial personality and business-like character of Mr. Frank Rauchfuss, of Denver, who has been its secretary and manager for the entire period.

R. H. Richmond, Deputy State Apiarist of Colorado, and Professor of Entomology at the Colorado Agricultural College, visited the Intermountain Bee Culture Field Laboratory, at Laramie, Wyo., early in March.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, in Charge

Dr. L. O. Howard visited the New Orleans laboratory on March 9. He was especially interested in three species of parasites sent from Argentina by H. A. Jaynes, who is collecting parasites in South American countries for trial against the sugar cane moth borer in the United States.

Dr. Charles H. Richardson, of the Department of Entomology, Iowa Agricultural College, at Ames, visited the field laboratory at Webster Groves March 6. Dr. Richardson is conducting research and teaching in insect physiology, and was returning from a conference with Prof. Dean, Dr. O'Kane, Prof. Flint, and others, under the auspices of the Crop Protection Institute, at a chemical manufacturing plant near St. Louis, Mo.

Importations of parasites of the European corn borer have progressed satisfactorily in the recent winter. The actual cost per parasite has been much lower than in any previous year, and the parasites are in good condition. Four species which pass the winter in the cocoon total 110,742 in number. The corn-borer larvae shipped this winter from France number 1,244,900, and 122,069 have been received from Japan. From these will be reared at least ten other species of parasites which pass the winter inside the living borers.

A. B. Baird, in charge of parasite work in Canada, visited the field laboratory at Arlington, Mass., on March 14 and 15.

Dr. D. M. DeLong conferred with Dr. F. W. Poos in March regarding the species of the genus Empoasca that may be responsible for causing alfalfa yellows, and similar injury to legumes other than alfalfa. Some very interesting taxonomic angles to the whole problem of alfalfa yellows were developed, emphasizing the value of taxonomic work in economic entomology.

Roy E. Campbell, of the field laboratory at Alhambra, Calif., visited the field laboratory at Tempe, Ariz., on March 26.

D. W. Jones, in charge of the field laboratory at Arlington, Mass., and Dr. C. H. Batchelder, in charge of the chemotropic and insecticide work there, recently conferred with Prof. W. C. O'Kane, of the University of New Hampshire, at Durham, N. H. Since these persons are already in very close contact with the Boyce-Thompson Institute, with Dr. R. C. Roark, of the Insecticide Division, Bureau of Chemistry and Soils, and with Dr. G. H. Adams, of the Bureau of Chemistry and Soils, who is stationed at Boston, very valuable cooperation in the campaign against the European corn borer is being secured.

Mr. Hisashi Nishikawa, of the Agricultural Experimental Station, The Government-General of Chosen, Suigen, Chosen, Japan, visited the Bureau of Entomology March 20. Mr. Nishikawa is interested in sericulture.

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Mabel Colcord, Librarian

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